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EXAMINER	
KOSAR, ANDREW D	
ART UNIT	**PAPER NUMBER**
1654	

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/731,921	LINTNER, KARL	
	Examiner	Art Unit	
	Andrew D. Kosar	1654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-40 are pending in the instant application. Claims 1-40 are rejected.

Priority

Applicants claim of priority to PCT/EP03/14019 is acknowledged. Accordingly, the priority date is November 17, 2003.

PTO-892

The Examiner has relied on references N, O, and P insofar as the information provided by the English Abstract.

Examiner Notes

Herein, citations to relevant passages of U.S. Patents are as (Column #: line #), i.e.- (c3:1+). For foreign patents and non-patent literature it is as (Page #), i.e.- (p1), and when applicable (Page #: line or paragraph #), i.e.- (p1:4 or p1:p4). U.S. PGPUB, and references with specific paragraph identifiers are listed as [paragraph #].

Specification

The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re*

Hawkins, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

The disclosure is objected to because of the following informalities: The use of the trademarks SEDERMA, PEPTIDE-CK, LAMIN, and SIGMA (all on p30), BIOPEPTIDE-CL (p31), and TROLOX (p32) are noted in this application. They, and any trademarks not identified above, should be capitalized wherever they appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Additionally, it is noted that MATRIXYL 3000 has the '®' symbol as MATRIXYL® 3000 and MATRIXYL 3000®.

Appropriate correction is required.

Claim Objections

Claims 13 and 31 are objected to because of the following informalities: The claims recite improper Markush language. Suggested Markush language is, "...selected from the group consisting of A, B, and C."

Claims 10, 20, and 29 are objected because they recite improper Markush language. Multiple occurrences of and/or are recited through out, which is improper in Markush language. Further, the Markush group is improper because it contains the elements contained must share a common property. For example, an enzyme activator

and enzyme inhibitor act contrary to each other. Additionally, for example, an enzyme and a propellant are unrelated compounds.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-22, 24, 26-33, 35, 37, 38, and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "undue" in claims 9 and 28 is a relative term which renders the claim indefinite. The term "undue" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claims 13 and 31 are vague and indefinite because it is unclear whether the Markush groups are (berberine) or (chrysin and a chelator and a carrier); or (berberine or chrysin) and (a chelator and a carrier); or ((berberine) or (chrysin and a chelator)) and (a carrier).

Claims 15-20, 24, 26-29 recite the limitation "topical". There is insufficient antecedent basis for this limitation in the claim. The claim from which they depend recites only "composition".

Claims 10, 20, and 29 recite that, "... the additional ingredient is a ..." The claim is unclear whether the claim should read as a Markush group, "...the additional ingredient is selected from the group consisting of..." Further, as the claim currently

recites, it is unclear whether a single compound could meet all of the limitations of each property, such as being both an enzyme inhibitor and an enzyme activator. As such, the claim is vague and indefinite.

Claim 14 recites 'above that exhibited by controls'. "Above that exhibited by controls" is not defined by the claim and the specification does not provide guidance as to the metes and bounds of 'above' or 'controls', rendering the claim vague and indefinite.

Claims rejected, but not specifically addressed, are rejected as being dependent directly, or indirectly, from a rejected claim under 112, second paragraph and for failing to correct the deficiency.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-12, 14-30, 32-37, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Renaissance Cream", herein RC[A];

As evidenced by "Renaissance vs. the Competition"[B], herein RVC, Chemical information "Rutin"[C], herein Rutin, McBride and Leatherbarrow[D], herein McBride,

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[A] PTO-892, reference W.
[B] PTO-892, reference V.
[C] PTO-892, reference X.
[D] PTO-982, reference U (p1 of 2).

"Coneflower"[E], "Revitacil"[F], U.S. Patent 4,686,282, herein '282, and U.S. PGPUB 2004/0120918 A1, herein '918.

The instant claims are drawn to compounds/compositions comprising:

a) between about 0.00001% and about 0.5% w/w of at least one rigin-based tetrapeptide and about 0.00001% and about 1.0% w/w of at least one GHK-tripeptide; and b) at least one additional ingredient (Claim 1), wherein said tetrapeptide and said tripeptide are present in a ratio of from about 50:1 to about 1:50 (Claim 2), preferably in a ratio of from about 10:1 to about 1:10 (Claim 3).

The composition of claim 1 is formulated such that said tripeptide is present in an amount that is greater than the amount of said tetrapeptide by % w/w(Claim 4).

The composition of claim 1 is formulated such that at least one of said tripeptide and said tetrapeptide is an acyl derivative (Claim 5), preferably wherein said tripeptide and said tetrapeptide are acyl derivatives (Claim 6), specifically the tetrapeptide is N-palmitoyl-Gly-Gln-Pro-Arg (SEQ ID NO: 3) (Claim 7) or wherein said tripeptide is N-palmitoyl-Gly-His-Lys (Claim 8).

The additional ingredient in said topical compositions of any of claims 1, 2, 4, 5, or 6, is suitable for application to keratinous tissue when incorporated into said composition without undue toxicity, incompatibility, instability, or allergic response (Claim 9), wherein said at least one additional ingredient is a cleaning agent, hair conditioning agent, skin conditioning agent, hair styling agent, antidandruff agent, hair growth promoter, perfume, sunscreen, sunblock, pigment, moisturizer, film former, hair

[E] PTO-892, reference U (p2 of 2).

color, make-up agent, detergent, pharmaceutical, thickening agent, emulsifier, humectant, emollient, antiseptic agent, deodorant active, dermatologically acceptable carrier, surfactant, abrasive, absorbent, fragrance, coloring/colorant, essential oil, skin sensate, astringent, anti-acne agent, anti-caking agent, antifoaming agent, antimicrobial, antioxidant, binder, biological additive, enzyme, enzyme inhibitor, enzyme activator, coenzyme, botanical extract, ceramide, addition peptide, buffering agent, bulking agent, chelating agent, cosmetic biocide, denaturant drug astringent, external analgesic, polymer, quat, substantivity increasing agent, opacifying agent, pH adjuster, propellant, reducing agent, sequestrant, skin bleaching and/or lightening agent, skin-conditioning agent, skin soothing and/or healing agent, aloe vera, pantothenic acid and derivative thereof, allantoin, bisabolol, dipotassium glycyrrhizinate, skin treating agent, thickener, vitamin and derivative thereof (Claim 10), further comprising a plurality of additional ingredients and wherein at least one of said additional ingredients is a dermatologically acceptable carrier (Claim 11), or further comprising the additional ingredients rutin and Bowman Birk Inhibitor and a dermatologically acceptable carrier (Claim 13).

The claims are drawn to a second compound/composition comprising a mixture of at least one rigin-based tetrapeptide, at least one GHK-tripeptide, and at least one additional ingredient, said mixture exhibiting collagen I synthesis when applied to skin cells above that exhibited by controls (Claim 14), wherein said tetrapeptide and said tripeptide are present in a ratio of from about 100:1 to about 1:100 (Claim 15),

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[F] PTO-892, reference V (p2 of 2).

preferably wherein said tetrapeptide and said tripeptide are present in a ratio of from about 50:1 to about 1:50 (Claim 16), or wherein said tripeptide is present in an amount that is greater than the amount of said tetrapeptide by % w/w (Claim 17).

Further, the claims are drawn to the topical composition of claim 14, wherein at least one of said tripeptide and said tetrapeptide is an acyl derivative (Claim 18), wherein said tetrapeptide is N-palmitoyl-Gly-Gln-Pro-Arg (SEQ ID NO: 3) and said tripeptide is N-palmitoyl-Gly-His-Lys (Claim 19), or wherein said acyl group is bound to the N-terminal end of at least one amino acid and is a straight-chain or branched-chain, long or short chain, saturated or unsaturated, substituted with one or more hydroxyl, amino, acyl amino, sulfate or sulfide groups or may be unsubstituted, and which can be derived from acetic acid, biotinic acid, capric acid, lauric acid, myristic acid, octanoic acid, palmitic acid, stearic acid, behenic acid, linoleic acid, linolenic acid, lipoic acid, oleic acid, isostearic acid, elaidoic acid, 2-ethylhexaneic acid, coconut oil fatty acid, tallow fatty acid, hardened tallow fatty acid, palm kernel oil fatty acid, lanolin fatty acid or mixtures thereof (Claim 21), wherein said acyl group is an acetyl group, palmitoyl group, elaidoyl group, myristyl group, biotinyl group or octanoyl group (Claim 22).

The additional ingredient of the composition of Claim 14 is a cleaning agent, hair conditioning agent, skin conditioning agent, hair styling agent, antidandruff agent, hair growth promoter, perfume, sunscreen, sunblock, pigment, moisturizer, film former, hair color, make-up agent, detergent, pharmaceutical, thickening agent, emulsifier, humectant, emollient, antiseptic agent, deodorant active, dermatologically acceptable carrier, surfactant, abrasive, absorbent, fragrance, coloring/colorant, essential oil, skin

sensate, astringent, anti-acne agent, anti-caking agent, antifoaming agent, antimicrobial, antioxidant, binder, biological additive, enzyme, enzyme inhibitor, enzyme activator, coenzyme, botanical extract, ceramide, addition peptide, buffering agent, bulking agent, chelating agent, cosmetic biocide, denaturant drug astringent, external analgesic, polymer, quat, substantivity increasing agent, opacifying agent, pH adjuster, propellant, reducing agent, sequestrant, skin bleaching and/or lightening agent, skin-conditioning agent, skin soothing and/or healing agent, aloe vera, pantothenic acid and derivative thereof, allantoin, bisabolol, dipotassium glycyrrhizinate, skin treating agent, thickener, vitamin and derivative thereof (Claim 20).

The claims are drawn to a third cosmetic composition comprising:
a) between about 0.00001% and about 5.0% w/w of at least one ALAMCAT-tetrapeptide and between about 0.00001% and 10.0% w/w of at least one His-based tripeptide; and b) at least one additional ingredient, wherein said tetrapeptide and said tripeptide are present in a ratio of from about 50:1 to about 1:50 (Claim 24), wherein said tripeptide is present in an amount that is greater than the amount of said tetrapeptide by % w/w (Claim 25). Alternatively, at least one of said tripeptide and said tetrapeptide in Claim 23 is an acyl derivative (Claim 26), wherein said tetrapeptide and tripeptide (both of Claims 23 and 26) is N-palmitoyl-Gly-Gln-Pro-Arg (SEQ ID NO: 3) and N-palmitoyl-Gly-His-Lys, respectively (Claim 27).

The topical compositions of claims 25 and 27 have as the additional ingredient, at least one from the group: cleaning agent, hair conditioning agent, skin conditioning agent, hair styling agent, antidandruff agent, hair growth promoter, perfume, sunscreen,

sunblock, pigment, moisturizer, film former, hair color, make-up agent, detergent, pharmaceutical, thickening agent, emulsifier, humectant, emollient, antiseptic agent, deodorant active, dermatologically acceptable carrier, surfactant, abrasive, absorbent, fragrance, coloring/colorant, essential oil, skin sensate, astringent, anti-acne agent, anti-caking agent, antifoaming agent, antimicrobial, antioxidant, binder, biological additive, enzyme, enzyme inhibitor, enzyme activator, coenzyme, botanical extract, ceramide, addition peptide, buffering agent, bulking agent, chelating agent, cosmetic biocide, denaturant drug astringent, external analgesic, polymer, quat, substantivity increasing agent, opacifying agent, pH adjuster, propellant, reducing agent, sequestrant, skin bleaching and/or lightening agent, skin-conditioning agent, skin soothing and/or healing agent, aloe vera, pantothenic acid and derivative thereof, allantoin, bisabolol, dipotassium glycyrrhizinate, skin treating agent, thickener, vitamin and derivative thereof (Claim 29), specifically wherein the additional ingredients are rutin and Bowman Birk Inhibitor and a dermatologically acceptable carrier (Claim 30).

Alternatively, the topical composition of claim 23 has as an additional ingredient a component that is suitable for application to keratinous tissue when incorporated into said composition without undue toxicity, incompatibility, instability, or allergic response (Claim 28).

The common feature is the tripeptide of palmitoyl-Gly-His-Lys, and the tetrapeptide of SEQ ID NO:3. The specification teaches that ALALCAT-tetrapeptides, "...fall within the definition of rigin-based peptides." (p3:p2 [0008]). Further, GKH-

tripeptides are Gly-His-Lys tripeptides, or derivatives and analogs (p3:p1 [0007]). His-based tripeptides are the larger genus of GHK tripeptide (p3:p3 [0009]).

The claims are further drawn to methods using the compounds:

The compound of Claim 1 is applied to the skin in a method of reducing the visible signs of aging (Claim 32).

The compound of Claim 14 is applied to the skin in a method of reducing the visible signs of aging (Claim 33).

The composition of Claim 23 is applied to the skin in a method of reducing the visible signs of aging (Claim 34), or in a method of reducing stretch marks (Claim 36), or in a method of reducing dark circles under the eyes (Claim 39).

The composition of Claim 12 is applied to the skin in a method of reducing stretch marks (Claim 35).

The composition of Claim 30 is applied to the skin in a method of reducing stretch marks (Claim 37).

The common feature of all of the methods is that they comprise the single step of applying topically.

The evidence sets the background for the rejection, and will be presented first, in an effort to link terminology between the instant claims and the prior art.

While RC is the basis of the rejection, RVC directly teaches the components of "Renaissance Cream" more clearly as a list. The components of "Renaissance Cream" are: Deionized Water, Glycerin, Butylene Glycol, Palmitoyl Pentapeptide-3(MATRIXYL), *Phyllanthus Emblica*, *Siegesbeckia Orientalis* Extract (DARUTOSIDE), Polyglyceryl

Methacrylate, Propylene Glycol, Palmitoyl Oligopeptide (BIOPEPTIDE-CL), Almond Oil, Caprylic/Capric Triglyceride, Sesame Oil, C_{12-15} Alkyl Benzoate, Glyceryl Stearate, PEG-100 Stearate, PPG-12/ SMDI Copolymer, Cocoa Butter, Triethanolamine (To Adjust pH), Stearic Acid, Shea Butter, Tocopherol (Natural Vitamin E), Glucosamine HCl, Algae & Yeast Extracts, Urea, Mango Butter, *Imperata cylindrica* root Extract, Xanthan Gum, Methylparaben, Coneflower and Hydrocotyl Extracts, Propylparaben, Bearberry Extract, Peppermint Oil, Retinyl Palmitate, Dipotassium Glycyrrhizinate (Licorice root Extract), Phospholipid, Aqua, Carbomer, Polysorbate-20, Steareth-20, Palmitoyl Tetrapeptide-3 (RIGIN), Acetyl Hexapeptide-3 (ARGIRELINE), Cetearyl Alcohol, Dicetyl Phosphate, Ceteth-10 Phosphate, Linoleic Acid, Methylsulfonylmethane (MSM), Alcohol, Glycine Soja sterols, Phenoxyethanol, Hydrolyzed Vegetable Protein, Ascorbyl Palmitate, Lavender Essential Oil, Disodium EDTA, *Chlorella vulgaris* Extract, *Coralline officinalis*, and Magnesium Aluminum Silicate. It is further taught that Glycines Soja Sterols are soybean extracts (p3). [Underline added by Examiner]

Bowman-Birk Inhibitor (BBI) is taught by McBride to be extracted from soybeans (p909, 'Name and History'). Simply, a soybean extract.

Rutin is present in *P. emblica*, as evidenced in Rutin (p4, bottom of page). It is also present in Coneflower (p4, bottom of page), as evidenced by Coneflower.

'918 teaches us that BIOPEPTIDE-CL is the Tradename under which palmitoyl – Gly-His-Lys is marketed by SEDERMA (paragraphs [0008] and [0021]).

'282 teaches that Rigin is the sequence Gly-Gln-Pro-Arg, "located in the peptide region of human IgG which spans the C_H2 and C_H3 domains at aa 341-345" (c7:5+, citing Veretennikova, *et ai.* Journal of Peptide Protein Research (1981), 17, 430).

Revitacil teaches that, "Palmitoyl Tetrapeptide-3 is a synthetic peptide that is a fragment of IgG that has been combined with palmitic acid." (p2).

Absent evidence to the contrary, the Examiner has determined, *vida infra*, that Palmitoyl Tetrapeptide-3 (RIGIN) is the same as palmitoyl-Gly-Gln-Pro-Arg (SEQ ID NO:3, of the instant application).

RC teaches "Renaissance Cream", as evidenced *supra*. In view of the evidence, RC teaches the composition as claimed, specifically topical compositions comprising tripeptides and tetrapeptides; GHK-tripeptide and rigin-based tetrapeptide; and His-bases tripeptide and ALAMCAT-tetrapeptide, wherein the tripeptide is palmitoyl-GHK and the tetrapeptide is palmitoyl-Gly-Gln-Pro-Arg (SEQ ID NO:3). Further, RC teaches the composition comprising additional dermally acceptable, hypoallergenic ingredients, as well as having as an ingredient rutin and Bowman-Birk Inhibitor. RC teaches that the compound is applied dermally for stimulate collagen synthesis, reduce stretch marks, improve skin smoothness, and decrease the length, ridges, and discoloration of stretch marks (p1). Further, RC teaches that skin will tan more evenly, and elasticity, firmness, smoothness and toned surfaces will be improved (p1). RC teaches that the ingredient Palmitoyl Pentapeptide-3 enhances synthesis of Collagen-I. (p2). RC teaches that the composition is dermally applied for a period of time sufficient to notice improvement, *vida infra*, "Significant improvement was observed after 6 weeks of

clinical testing." (p1). RC teaches that Palmitoyl Tetrapeptide-3, "help[s] restore [a] youthful skin appearance" (p3), that is reduce the signs of aging. RC teaches that the composition comprises Emblica, which is a, "skin lightener" that, "significant[ly] lighten[ed] freckle spots after 8 weeks" (p2). Further, it is taught that skin lightening agents, such as Emblica, are, "used ... to treat age spots..." and that Emblica has been demonstrated to lighten skin (p2). Emblica is taught to be an iron and copper chelator (p2).

RC does not explicitly teach the concentrations of the tetrapeptide and tripeptide components as in the instant application.

It would have been obvious to one skilled in the art at the time of invention to determine all operable and optimum tripeptide and tetrapeptide component ratios in the claimed composition of "Renaissance Cream", because component ratios are an art-recognized result-effective variable that is routinely determined and optimized in the composition arts.

The evidence presented *supra* is relied upon for the reasons discussed above. If not expressly taught by any one of the references, the adjustments of particular conventional working conditions (e.g., determining one or more suitable component concentration ranges of peptide), is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the skilled artisan.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of

ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Claims 13, 31, 38, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over RC, as applied to Claims 1-12, 14-30, 32-37, and 39, in view of U.S. PGPUB 2002/0132845 A1, herein ´845, or in view of U.S. Patent 6,596,761, herein ´761, as evidenced by RVC, Rutin, McBride, "Coneflower", ´282, and ´918.

The instant claims are presented *supra*. Further, claims are drawn to the topical composition of claim 10 further comprising the additional ingredients berberine or chrysine and a chelating agent and a dermatologically acceptable carrier (Claim 13), the topical composition as in claim 29, wherein the additional ingredients are berberine or chrysine and a chelating agent and a dermatologically acceptable carrier (Claim 31), and a method of reducing dark circles under the eyes comprising applying to skin in need of such treatment the composition of claim 13 (Claim 38), and a method of reducing dark circles under the eyes comprising applying to skin in need of such treatment the composition of claim 31 (Claim 40).

The teachings of RC are *supra*. It is noted that RC teaches chelators, specifically EDTA, and dermatologically acceptable carriers, such as butters, glycols, alcohols, RC does not teach berberine or chrysin(e) as a component of the composition, or the administration of said composition.

´845 teaches a dermal composition for treating and/or ameliorating the symptoms of tissue ischemic conditions wherein the flavenoid is selected from a group including

chrysin or rutin, among others ([0019]). The teachings suggest that any flavenoid may be substituted for beneficial results.

′761 teaches a method for treating or prophylactic treatment of stinging, or the non-specific itching of skin by administration of a formulation comprising any one of multiple flavenoids, including chrysin (Claim 1). The teachings suggest that any flavenoid may be substituted for the beneficial treatment of itching.

One would have been motivated to substitute crysin for rutin in the dermal composition of RC, with a reasonable expectation for success, because chrysin and rutin are flavenoids which shares a common core structure, and would be expected to have similar physical and chemical properties as well as similar biological activity, acting as an antioxidant. Selection and/or substitution of a flavenoid, which is an additive in a composition, to act as an antioxidant is well within the purview of the skilled artisan.

Both RC and ′845, alternatively ′761, teach that the compositions are useful for treating skin conditions. As set forth in *In re Kerkhoven*, 205 USPQ 1069 (CCPA 1980), "It is *prima facie* obvious to combine two compositions each of which is taught by prior art to be useful for same purpose in order to form third composition that is to be used for very same purpose; the idea of combining them flows logically from their having been individually taught in prior art."

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of

ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Additional Art of Interest

The Examiner notes that the English Abstracts of JP 2000319154 A, JP 04356424 A, and JP 02240009 A are of interest, teaching dermal compositions with alternate flavenoids.

NO CLAIMS ARE ALLOWED.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew D. Kosar whose telephone number is (571)272-0913. The examiner can normally be reached on Monday - Friday 8am-430pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on (571)272-0974. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew D. Kosar, Ph.D.
Patent Examiner
Art Unit 1654

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